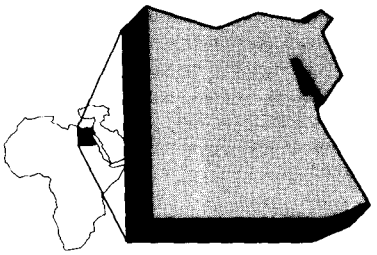
CHAPTER SIX



PRIMARY-SCHOOL TEACHERS IN EGYPT*

In 1982, a team of researchers from the Faculty of Education at Ain Shams University carried out a research project entitled *Status of Primary-School Teachers in Egypt*. The study involved 63 part-time researchers and cost CAD 93 000 of which IDRC contributed CAD 73 000. At that time, the government was prepared to embark upon a major program to retrain primary-school teachers. To implement this policy decision in the best possible way, however, the Ministry of Education needed much better information than it had about the 140 000 teachers in the country — their academic and teaching qualifications, their teaching skills, and their socioeconomic status. This chapter illustrates some of the difficulties met in public policy work: where are the "optimum" decisions about what to do and how to go about it? It also shows the role that descriptive research can play in the process of trying to improve decisions about and programs of investment in a nation's most important development resource: its children.

THE SETTING: EDUCATION IN EGYPT

Education is universally acclaimed as a prerequisite for development, or as a necessary condition for solving problems of underdevelopment. For more than a century, however, the educational system in Egypt has itself been a problem. Currently, there are some 7.5 million pupils and 140 000 teachers in the country. Although numbers of students and teachers have grown at all levels, especially primary (also called "compulsory," "elementary," and, of late, "basic"), the overall qualitative picture at this level has remained static or even deteriorated. Also, levels of remuneration, social status, and job satisfaction

**This chapter was prepared from a study carried out by Dr Saad Eddin Ibrahim, Professor of Sociology, American University, Cairo, assisted by Dr El-Safty and Dr Amani Kandil.*

vary considerably among teachers in urban, rural, industrial, and desert communities.

The Arab Republic of Egypt has set itself an ambitious educational goal: universal primary education by the year 1990. The reasons for such a policy are basic: primary education is the level most available to the Egyptian people, it is considered to be their "right," and it is said to prepare every child both to achieve his or her own ambitions and to contribute to the development of the state. However, expanding the opportunity for education does not mean improving the quality of education. Quite the contrary, unfortunately, is the case in much of the world.

The primary-school teacher is considered to be the linchpin of educational reform — the decisive factor in achieving the individual and national goals of universal education. The Ministry of Education in Egypt has, over the years, gradually increased the certification necessary to become a primary-school teacher from 11 years of schooling in 1955, to 2 years of university in 1962 and to 4 years of university more recently. Only a small number of teachers have this level of qualification and against this background, the Government of Egypt has taken firm action to upgrade the education both of teacher trainees and of the 140 000 practicing teachers.

WHAT HAS HAPPENED: POLICY AND PROGRAM EVOLUTION

In September 1979, Egypt's Ministry of Education issued a working paper that noted the unsatisfactory state of education in the country, proposed tentative reforms, and called upon experts and opinion leaders to debate the issue.

Two years later, the People's Assembly — Egypt's parliament — passed Law 139, which the President ratified on 9 August 1981. The new law unified and integrated all regulations bearing on Egypt's entire educational system. It decreed, among other things, that the first, compulsory, stage of education was to be called Basic Education, and was to span 9 years. Its objectives were to establish closer links between education and employment and to improve the integration of schools with the local community and environment through diversification of curricula that allowed for acquisition of practical and relevant skills.

Also in 1981, in response to a general request by the Ministry of Education, the Faculty of Education at Ain Shams University proposed a research study to provide information on the teaching competencies and the socioeconomic status of primary-school teachers. With funding from IDRC, the research was carried out in 1982 under the direction of Dr Abdel Ghaffar, then Dean of the Faculty.

After the study was completed, the Minister of Education (then Dr Mustafa Kamal Helmy) asked a team led by Dr Abdel Ghaffar to translate its recommendations into a program of action. The new team consisted of most of the principal researchers who had taken part in the study, along with several professors from other faculties of education

and a few from the National Centre for Educational Research (NCER). They met frequently over 60 days:

- To analyze the Canadian-sponsored study in depth;
- To establish the appropriate level to which primary-school teachers would be upgraded; and
- To plan the upgrading program in terms of courses; total number of credit-hours required to graduate; numbers of students to be enrolled every year and criteria for their selection; methods of instruction; reading materials; examinations; numbers of textbook authors, instructors, and administrators; and budget estimates.

The Ministry of Education approved, with minor modifications, the plan submitted by the team, including the proposal for a *Program for Upgrading Primary-School Teachers*. The Faculty of Education at Ain Shams University was entrusted with overseeing implementation, finances, and administration of the program. The academic aspect of the planned program was submitted to Egypt's Supreme Council of Universities, with the request that the Bachelor of Arts degree be granted to those who successfully completed its 4 years. The request was officially approved on 10 March 1983, thus clearing the way for concrete action.

Dr Abdel Ghaffar, who was put in charge of overall implementation, established a Supreme Supervisory Committee consisting of all 13 deans of Egypt's faculties of education to help in the task.

In July 1984, the Ministry of Education issued a white paper on *Developing and Modernizing Education in Egypt: Policies, Plans, and Programs of Implementation*.

Of immediate concern is what the white paper had to say about primary schooling. Two policy proposals stand out in this regard: first, the proposal to replace "Primary Education" with "Basic Education." This implies extending compulsory schooling from 6 to 9 years and diversifying the curriculum to include "practical subjects" designed to equip pupils with knowledge and skills enabling them to make a living or to continue their education. Second, it was proposed to train new teachers for Basic Education and to upgrade present primary-school teachers to college level for the same purpose.

On the last point, the white paper said that all who responded to the working paper of 1979 were unanimous on the need to accord the highest priority to preparing and training teachers and to enhancing their professional and socioeconomic status. Opinion was also nearly unanimous on the necessity for a university education for teachers at all levels — basic, general secondary, or technical secondary. "Some 140 000 primary-school teachers are to be upgraded to the university level."

THE PROGRAM

The *Program for Upgrading Primary-School Teachers* is, by all accounts, the first time that the Egyptian government has officially committed itself to enhancing the professional and socioeconomic status of teachers involved in the first stage of formal education.

It started in the academic year 1983/84 with 6000 student teachers in the Greater Cairo area. In 1984/85, it expanded to Alexandria, Dakhahlia, and Gharbia, where there are faculties of education to supervise it and provide lecturers. In its 2nd year, the program attracted 9000 additional students, bringing total enrollment to 15 000 in 1985.

According to the Minister of Education,[1] 18 000 more students will enter the program in 1985/86, and the geographic scope will expand to include four additional governorates. The plan is to keep expanding scope and enrollment until some 140 000 primary-school teachers with subcollege qualifications have all been upgraded. This is expected to be accomplished in 10 years, by 1993/94.

The program seeks to upgrade the primary-school teacher's efficiency and ability to participate in general activities and administrative matters, to develop academically and professionally, and to play an active role in developing education, raising the standard of the profession, and in community development.

Enrollment in the program is open to all primary-school teachers, but preference in selection is given to those who have been working for at least 10 years and who hold a diploma from the 5-year teachers' institutes following the preparatory school certificate (granted upon passing the ninth grade). Older teachers who have fewer than 14 years of service before retirement are discouraged from applying.

The program covers a period of 4 academic years, each comprising 30 weeks. The academic year is divided into two 4-month terms and a 2-month summer term.

In the first 2 years, the student takes general courses aimed at preparation for the first 4 years of basic education, in addition to courses in psychology and education that are meant to help him or her in the profession. In the last 2 years, the student must specialize in either Arabic language, religion, and social sciences or in science and mathematics.

Practical subjects are taught in all 4 academic years, and students are expected to choose one field — commerce, agriculture, industry, or home economics.

The terms are based on a credit-hour system, and the examinations held at the end of each term are mostly the multiple-choice type. A student who scores lower than 50% in any subject fails the course. However, a student can pass from one academic year to the next if no more than two subjects are failed, provided that he or she repeats the examinations in these subjects the following year. If any subject is failed at the end of the 2nd year, the student cannot progress to the 3rd, when specialization is required. All subjects that were previously failed must be passed before the student can go on to the 3rd year, and he or she cannot sit for reexamination in any subject more than once.

Professors are assigned to write special books for the program and, although these professors teach in the Faculty of Education in Ain

[1] *From an interview with the Minister, Dr Abdel Ghaffar, conducted by Dr Saad Eddin Ibrahim (1 July 1985).*

Shams University, the texts are not the same as those used in the faculty.

Classes start at 5 P.M. — after official working hours — and students are not paid to attend. Professors are paid according to the number of hours they teach, and those who are assigned to write books receive additional remuneration.

The organization of the program and its implementation rest upon the concept of "remote education." In addition to attending lectures and meetings with their professors at the training centres, students enrolled in the program have the opportunity to listen to (or watch) lectures on national radio and television during designated hours every week.

THE RESEARCH PROCESS

OBJECTIVES

As mentioned earlier, the purpose of the *Status of Primary-School Teachers* study was "to determine the teaching competencies as well as the socioeconomic status of Egyptian primary-school teachers." It was conducted "within the framework of the country's serious attempts at the comprehensive development of all aspects of the educational process," and is one of several studies undertaken by the Faculty of Education on various aspects of Egypt's educational system.

Specific goals of the study were

- To develop a list of teaching competencies that enable teachers to perform their jobs effectively;
- To develop tools for teacher evaluation;
- To present a true picture of teachers' status;
- To describe a set of teaching skills to serve as a basis for retraining primary teachers and upgrading their proficiency; and
- To develop the foundations of competency-based, on-the-job teacher training.

RESEARCH DESIGN

The methodology consisted of eight interrelated steps. First, the literature on competency-based teacher education was reviewed, with a view to developing a list of teaching competencies that had proved relevant in previous studies. Second, whether Egyptian primary-school teachers actually possess such competencies was determined and, third, research tools were designed to measure them.

Fourth, a representative sample of primary-school teachers with different backgrounds was selected from all over the country. Fifth, a group of assistants was trained to use the research tools, to contact authorities in the Ministry of Education, and to select research sites that would facilitate field work. Sixth, data were collected through classroom observation and through questionnaires administered to teachers, supervisors, and school principals. Seventh, the data were analyzed

and interpreted. Finally, eighth, policy recommendations geared toward competency-based teacher education were formulated.

OPERATIONALIZATION OF RESEARCH DESIGN

The team decided on four major research tools: the Teacher observation form, the Supervisors' questionnaire, the Principals' questionnaire, and the Teacher socioeconomic status inventory.

The Teacher observation form comprised 69 items bearing on six dimensions of teaching competency. A trained neutral observer was to attend one class and check the presence or absence of each item in the teacher's performance. Value judgments on the part of the observer were intended to be absent or minimal and only for a limited number of items did the observer have to write in a qualitative remark.

The Supervisors' questionnaire comprised some 49 items bearing on five dimensions of teaching competency. Although all were part of the Teacher observation form, the items in this questionnaire were to be filled in by the supervisors regarding their respective teachers in the sample and most items called for subjective evaluation of those teachers.

The Principals' questionnaire comprised 32 items bearing on six dimensions of teaching competency — some new and others overlapping with the two previous questionnaires. Most items to be filled in by school principals called for expression of opinions.

The Teacher socioeconomic status inventory comprised 31 items eliciting biographical data such as career, income, ownership of durable goods, and level of savings, as well as eliciting attitudinal and perceptual data on level of job satisfaction and self-assessment vis-à-vis the community and other occupations. This was the only questionnaire to be completed by the teacher.

Termed "Competency Sets" in the study report, nine dimensions of teacher performance in class, school, and community were observed (Table 1).

Table 1. Competency sets and their utilization in research forms.

Competency dimension	Research form		
	Teacher observation	Supervisor's questionnaire	Principal's questionnaire
Lesson planning and preparation	X	X	–
Achieving objectives	X	–	X
Teaching process	X	X	–
Use of subject matter, audio-visuals and learning activities	X	X	X
Interacting with pupils and classroom management	X	X	X
Evaluating pupils	X	X	–
Regularity in attendance	–	–	X
Establishing sound relationships with others	–	–	X
Preparing to solve community problems	–	–	X

THE SAMPLE

A sample of 1039 primary teachers was drawn from 72 schools in 6 of Egypt's 25 governorates — Cairo (the national capital), Daqahlīya and Ismailia (Lower Egypt), Asyūt and Sawhaj (Upper Egypt), and New Valley (Western Desert). General characteristics of the sample were: 48.3% males versus 51.7% females; 61.0% of the subjects were qualified teachers, i.e., with at least a diploma in education; and 51.7% were from urban areas, 18.5% from industrial areas, 17.9% from rural areas, and 11.9% from desert areas.

RESULTS

The data revealed that the overall teaching competency of Egyptian primary-school teachers ranged from weak to moderate.

The study considered the possession of less than 25% skills exercised in any of the nine competency sets as *very weak*; from 25–50% as *weak*; from 50–75% as *moderate*; and more than 75% as *good*. Accordingly

- Scores were lowest (very weak) on Use of subject matter, Audio-visual aids, and Activities. Even when the sample was broken down by governorates, area, sex, and qualification, rarely did any subcategory exceed the 25% mark.
- Other competency dimensions that featured weak scores were Teaching process, Evaluating pupils, and Achieving objectives, in that order.
- Teachers scored moderately (i.e., possessed 50–75% of relevant skills) on four of the nine competency sets — Preparing to solve community problems, Lesson planning and preparation, Interacting with pupils and classroom management, and Establishing sound relationships with others — in that order.
- On only one dimension of competency did teachers score highly (more than 75%): that was Regularity of attendance.

The greatest variation in scores on the above was displayed among the governorates. Teachers from Cairo scored lowest of all governorates on five of the nine competency indicators and never scored highest. In contrast to Cairo, those from Sawhaj Governorate scored the highest on four of the nine sets and were followed in overall performance by their counterparts in the New Valley and Asyūt governorates. Curiously, this rank order corresponds with distance from the capital (Sawhaj being the farthest).

Variations associated with area or environment were next in degree. Teachers in desert districts demonstrated the highest overall performance, and those in rural and industrial areas, the lowest. The scores of teachers in urban areas fell between the two extremes.

There were some variations associated with sex of teachers. Men performed better than women in six of the nine competency sets but female teachers did slightly better on two competency sets — Lesson planning and preparation (55 vs 53%) and Evaluating pupils (48 vs 47%).

The least variations observed were those related to teachers' qualifications. The study did not reveal any significant differences in scores between holders of a special diploma in education and those who had not received any teacher training.

Finally, we come to the results of the Socioeconomic status survey. The data were analyzed and presented only in terms of the environmental variable or type of community, i.e., urban, industrial, rural, and desert. The sharpest differences, real and perceived, on most indicators existed between urban and rural districts.

Urban teachers were 10 years older (averaging 39.3 years), with nearly twice the number of teaching years (11.2), better educated spouses (median of secondary-school certificate), and with fewer children (average 1.9 vs 3.0 in rural areas).

The contrast between teachers in the two types of communities extended to levels of income and savings. Those in urban areas had a monthly average income of EGP 94.8 compared with EGP 51.7 in rural areas (in 1982, 1 Egyptian pound [EGP] = 1.76 Canadian dollar [CAD]). The former saved about EGP 28/month, against EGP 14 for their rural counterparts. More teachers in urban districts than in rural districts possessed durable goods and other amenities.

When it came to perceptions of self, job, and status, however, primary teachers in desert areas scored positively higher than their counterparts in the other three communities. For example more of them felt good about their general appearance (84% compared with 52% in industrial areas), and expressed greater job satisfaction (92% compared with 73% in industrial areas). Likewise, more of them expressed satisfaction with their social status (74% compared with 55% in rural and 65% in urban areas) and economic status (57% compared with 32% in rural and 33% in industrial areas). On these indicators, teachers in urban areas scored next to their desert counterparts.

About 33% of all teachers would leave the profession because of social or economic reasons. However, the percentage was markedly lower for urban and desert teachers (22 and 26% respectively).

What emerges from the above is that, although urban teachers enjoyed the best socioeconomic conditions, they felt second-best about them. Teachers from desert areas were second in socioeconomic status yet were most satisfied of all groups with their status. Teachers from rural areas experienced the worst socioeconomic conditions — and they perceived them as such — so were the least satisfied.

RECOMMENDATIONS

The study concluded with three sets of policy recommendations related to improving the teaching–learning climate, upgrading teacher competencies, and developing teacher-preparation programs.

The first set is quite general and could apply to the overall educational system in Egypt — or, for that matter, any other part of the world. The second and third are more specific and, for the purposes of this report, more relevant.

Upgrading teacher competency would entail

- Upgrading the proficiency level of the supervisor and making his or her role more of an "advisor" than an "inspector";
- Making the evaluation of teachers' performance part of the tasks of both the senior teacher and the school principal;
- Changing seniority as the sole basis of promotion to more complex criteria in which academic qualifications and teaching competencies would have greater weight;
- Upgrading the training of principals to include administrative as well as professional competencies;
- Establishing teachers' centres in their local districts where continuous upgrading courses, workshops, and other innovative activities would take place;
- Raising the socioeconomic status of primary-school teachers to enhance their security and community standing;
- Consolidating and improving the system of evaluating pupils by teachers; and
- Impressing upon teachers the need to give equal emphasis to the affective, psychomotor, and cognitive aspects of the teaching–learning process.

The third set of recommendations calls primarily for confining primary-school teaching to holders of college degrees and special certificates of education and raising the level of present primary-school teachers to college level through special evening or correspondence courses or some other arrangement (e.g., open university). It is assumed that such courses, as well as teacher preparation programs in general, would improve teaching competency.

PRELIMINARY COMMENTS ON THE UPGRADING PROGRAM

The upgrading program has been in operation for 2 years and it will be another 2 before the first class graduates (at the time of writing, mid-1985). The impact of the program on the graduates' performance as teachers will not become apparent for many more years after that. Thus, a complete evaluation is premature at this point.

The detailed outlines for 60% of the courses in the upgrading program courses make them almost identical to those of the university's arts and science departments. Of some 65 courses taken in 4 years, 13 are in the field of education proper (i.e., preparation for the teaching profession). These education-related courses account for 47 of 300 credit-hours required in the program, or about 16% of the total. The vocational and community-related practical subjects constitute the equivalent of 32 credit-hours, or 11% of the total. Thus, all in all, the educational and practical subjects together make up roughly 25% of the program.

In the 4 years, the students are assigned some 80–90 textbooks, averaging 400 pages each, and 85% of the courses require written examinations. Given the limited time available to the typical student, who is a teacher from 8.00 A.M. to about 3.00 P.M. daily and may attend classes or listen to lectures on television from 5.00 P.M. to about 9.00 P.M.,

whatever energy that may remain goes to exam-oriented cognitive learning. The chance to develop other skills or innovative abilities is seriously restricted.

DROP-OUTS AND FAILURE RATES

The official records for the upgrading program in Cairo proper (not Greater Cairo, which includes Giza Governorate) indicate that, of about 4990 teachers who enrolled in the 1st year of the program (1983/84), 4270 sat for the end-of-semester exams. This means that about 720 students, or 14% dropped out in the 1st year. Some information is also available on failure rates. Of the 4270 students who sat for exams in the 1st year of the program, 2820 or 66% passed. Those who failed more than two courses, and hence had to repeat the 1st year, numbered 1450 or 34% of the total.

POLICYMAKERS' VIEWS

In 1985, Dr Ghaffar was Minister of Education and the legitimate "father" of the program. Five years before becoming a cabinet member, he had coauthored the working paper on Egypt's state of educational affairs, which triggered debates, discussions, and research. He was then Dean of the Faculty of Education at Ain Shams University, and worked closely with Dr M.K. Helmy, then Minister of Education. Again, Dr Ghaffar was instrumental in drafting Law 139 and the white paper on *Developing and Modernizing Egyptian Education*. Equally important, he directed the IDRC study of the status of primary-school teachers, and was first director of the upgrading program. Few men in Egypt's educational establishment have managed to play all these roles. Dr Ghaffar noted the following.

- Results of the program have generally exceeded earlier expectations.
- The study sponsored by IDRC was instrumental in planning the program; however, both the study and program are only part of wider research and policy efforts to overhaul Egypt's educational system.
- The upgrading program is more diversified than, and hence superior to, college-of-education curricula. The latter offer nothing, for example, on environmental, vocational, or religious education.
- There are some minor problems with finance and management — funds are lower than the program needs and management at the governorate and training centre levels is inexperienced.
- The academic side of the program is somewhat heavier and more difficult than it should be.
- On balance, the books used are authored by the best specialists, and the success rate of students is higher than in university faculties of education.

This generally positive assessment was shared by another high-ranking figure in the educational establishment, Dr Youssef Khalil, who until recently was Director of the NCER. He retired in 1983 and is currently a special advisor to the Minister of Education.

Other technocrats in the Ministry of Education and researchers at NCER have less positive views. Their criticisms centre on poor dissemination of the study carried out by Ain Shams University, the lack of involvement of NCER in planning the upgrading program, and the tendency for the management of the program to be monopolized by a particular "clique."

PROFESSORS' VIEWS

About 100 professors are engaged in teaching in the upgrading program in Greater Cairo and 10% of these were interviewed as a sample. They had comments on the implementation of the program (poor facilities at training centres and too much reading in proportion to teaching hours), their own financial and moral rewards (despite some problems, they would persevere), and their students (high rate of absence and lack of initiative).

The professors made the following suggestions for improving the program.

- Teaching hours should be increased and the amount of book reading decreased by 30%.
- The teaching load of those enrolled in the program should be halved so they can devote more time and energy to their studies.
- The students should have the summer off — teaching for 9 months of the year and studying year-round for the upgrading program leaves little time for rest.
- The selection criteria should be improved to admit only the more motivated and the best intellectually into the program.
- Physical facilities in the training centres should be improved.
- The television and radio educational programs directed at students in the upgrading program should be better prepared.
- The management of the program should be more decentralized.
- Greater diversity should be allowed in assigning and authoring textbooks — present practice is centrally determined with textbooks commissioned by Ain Shams University's Faculty of Education in collaboration with a supervisory committee made up of deans of other colleges of education.
- The number of practical and education courses should be doubled.
- A better system of evaluating the program, professors, and students must be devised.

The general impression from the interviews with the professors was favourable to the concept of the upgrading program. They were disappointed in many aspects of its implementation, but quite hopeful that some of the present defects would be corrected.

STUDENTS' VIEWS

About 7000 students are officially enrolled in the program in the Greater Cairo area. On the basis of interviews with 50 of them (0.7% sample) using a standardized form, the following perceptions about their attitudes emerged.

- Many thought teaching was an honorable profession — close to 65% expressed satisfaction with their careers, citing self-fulfillment and respectability as reasons; the remaining 35% said they were dissatisfied because of society's low esteem for teachers, the meagre financial rewards, and the hard work involved.
- About 25% thought very highly of the status of their occupation in society; however, slightly more than 30% ranked their occupation as low.
- About 65% came to the program mainly to raise their academic standard and about 20% reported the desire to get a university degree as a prime reason for being involved. Fewer students mentioned social status, promotion, and salary raises as considerations.
- More than 35% thought the material taught in the program was way above their heads, but close to 65% felt otherwise — a standard complaint was that too much was required and the number of class-hours was not sufficient to cover or digest the material assigned.
- Nearly 65% of students also complained about the scheduling of classes, but only 25% had difficulty getting to the centres where classes are held.
- Nearly 75% of the sample rated their professors as "good" — about 25% gave them an average rating. It is interesting to contrast the students' generally positive view of the credentials of their professors with the professors' generally negative view of the intellectual quality of their students.
- However, about 50% reported professors' irregularity in attending classes and a lack of responsiveness to their questions in class, and 40% said that their professors were generally not helpful at all.
- Most of the students felt the program had a positive impact on their academic standard but 20% were either unsure or felt that the program had made no difference — most of them also reported that their own teaching methods and performance had improved as a result of the program.
- Significantly, almost all students indicated their firm intention to complete the program, and would also recommend it to colleagues who have not yet enrolled.

CONCLUSION

Because of its potential impact on the largest part of Egypt's school population — some 7.5 million pupils and 140 000 teachers — the upgrading program is a landmark in the country's educational landscape. The speed with which the decision was made and implemented after such a long period of relative inactivity makes the case remarkable — and risky. Various forces — individual, political, social, academic, and bureaucratic — converged to produce the policy. No less significant was the interplay between action-oriented research and policy-making and between international development agencies and national institutions.

Confronted by mounting criticism of the state of primary schooling in Egypt, the Minister of Education in turn put pressure on the top bureaucrats to overhaul the system. Although somewhat averse to change and generally sceptical about academics, the ministry officials sought the advice of all the country's 13 deans of education, who were more than eager to be involved. Had their support not been solicited, the process of reform would probably have bogged down.

Of course, the search for solutions that began during the presidency of the late Anwar Sadat could have stalled at any point, but Mr Sadat's successor, Hosni Mubarak, was looking for fresh ideas and shared his wife's keen interest in educational reform.

In funding the research components of the process, prestigious international agencies such as IDRC and the World Bank added a rational dimension to the debate and imbued the whole effort with a "scholarly legitimacy."

The upgrading program may have been hurriedly planned and implemented; however, those who were deeply committed to the concept may have felt that it was better to exploit the momentum and do the refining later. Consequently, several weaknesses were bound to appear and some of the views voiced by critics of the scheme may be quite valid professionally. It is hard to draw the line, however, between unbiased assessment and opinion that may have been motivated by bureaucratic and professional jealousies.

As an example of the role of research in the development process, the program has several deficiencies and some striking features. It does not address the most fundamental question that lies at the end of a chain of questions: assuming that the program is maintained and run efficiently, will it make primary-school teachers more effective? Will the children be "better educated" in the sense of being better prepared to lead more fulfilled lives and contribute more to society? Such questions clearly offer great challenges to the acts of faith upon which many public interventions are based.

One feature of this chapter is that it is unfinished. The process of deciding and acting, of evaluating actions and trying to adjust them, then deciding and acting again continues. Those who operate on the basis of fixed-term projects should never be so short-sighted or immodest as to presume that their interventions are the be-all and end-all. Also, no social system operates in a totally rational fashion so that problems are accurately perceived and research is perfectly done to produce cast-iron results, on the basis of which perfect decisions are made and ideal programs implemented. This chapter has not disguised the imperfections of the process. To give one example, the research study found that there seemed to be little difference between formally qualified and nonqualified teachers in terms of some aspects of teaching competence. Yet the upgrading program is focused more on providing teachers with formal qualifications than on improving their teaching abilities per se. Is the research finding true and, if so, is it a defect in the program that greater attention is not given to how to teach better? Obviously, there is further scope for research as those responsible seek the elusive optimum.

Finally, like many others, this example is very much to do with the drive and commitment of an individual — Dr Abdel Ghaffar. As is shown, he was present as a leading figure at each stage in the process — coauthor of the 1979 working paper on the state of education, head of the research team, head of the team asked to design the program, and Minister responsible for its implementation. An important point to make is that the program was committed before he became Minister and continues without him (he has since left the cabinet). Unquestionably, however, social development depends on such people — bureaucracies and processes are merely the contexts within which they strive.